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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/887,083 | 06/25/2001 | Hisaki Miyamoto | P20983 | 8590 |

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| EXAMINER | |
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| MAKI, STEVEN D | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1733 | |

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/887,083 | MIYAMOTO ET AL. | |
| | Examiner | Art Unit | |
| | Steven D. Maki | 1733 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-4,6-8 and 14-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-8 and 14-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *052704* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5-28-04 has been entered.

2) The disclosure is objected to because of the following informalities:

On page 1 of the specification, "U.S. Application No. 09/147,140, filed October 16, 1998" should be changed to --U.S. Application No. 09/147,140, filed December 17, 1998, now U.S. Patent 6,309,485--.

With respect to the above change, the filing date of 09/147,140 is 12-17-98 (the date of receipt of 35 USC 371(c)(1), (c)(2) and (c)(4) requirements) instead of the filing date described in the declaration (the date applicant filed the specification). See MPEP 1893.03(b).

Appropriate correction is required.

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Japan '242

4) **Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '242 (JP 61-292242) in view of Japan '137 (JP 63-213137) and Europe '178 (EP 706178).**

Japan '242 discloses making a laminated optical disc comprising adjusting the position of a disc substrate 1 using a **centerer 3 having three radially movable contact pins 4**, applying adhesive to the inner and outer periphery of the disc substrate 1 while the substrate is turned, applying spacer rings on the disc substrates, applying adhesive on the spacer rings and superimposing a disc substrate 7 on the rings 5, 6 and adjusting the position of the disc substrate 7 using the centerer. Japan '242 is silent as to means for causing the radial movement of the pins. However, it would have been obvious to one of ordinary skill in the art to use an air cylinder to cause radial movement of the pins since Japan '137, also teaching the use of radially moveable pins to adjust the position of a disc substrate, suggests using an air cylinder to cause the radial movement of such pins. Furthermore, it would have been obvious to provide Japan '242 with a "laminator" for superimposing since (1) Japan '242 teaches superimposing the disc substrate 7 over the disc substrate 1 and (2) Europe '178 teaches using apparatus means (robot 41, transporter 45) to superimpose one substrate on another substrate and thereby improve productivity. As to adhesive applier, one of ordinary skill in the art would readily understand that an adhesive applier is used to apply Japan '242's adhesive. In any event: it would have been obvious to apply adhesive as

disclosed by Japan '242 with an "adhesive applier" since it is well known to use an "applicator" to apply adhesive as shown for example by Europe '178.

With respect to the pins being "... configured to simultaneously contact an inside circumferential edge of the common center hole [of the superimposed substrates]", the centerer of Japan '242 has this claimed capability since the centerer of Japan '242, like applicant's centerer comprises radially movable pins. Simultaneous alignment of two disc substrates relates to intended use of the apparatus and fails to require apparatus structure (e.g. pins) not disclosed by Japan '242.

As to claims 3, 4 and 6, note Japan '242 and Europe '178's teaching to use adhesive, Japan '242 and Europe '178's teaching to rotate the disc substrate and Europe '178's teaching to use an applicator to apply adhesive.

Europe '178

5) **Claims 1, 3, 4, 6, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '242 (JP 61-292242), Japan '137 (JP 63-213137) and at least one of Japan '234 (JP 4-57234) and Japan '629 (JP 62-124629).**

Europe '178, directed to method and apparatus for making a laminated optical disc, discloses providing a first disc and a second disc, applying adhesive in a donut shape to the first disc, superimposing the second disc on the first disc, rotating the discs to spread the adhesive and subjecting the adhesive to UV to cure the adhesive. See figures 3A, 3B, 3C and 3D and description thereof. The adhesive is applied using an "adhesive applier" which is schematically illustrated in figure 3A and is specifically

described as an applicator at col. 14 lines 30-31. The second disc is superimposed on the first disc by a "laminator" (e.g. robot 41, transporter 45). See figure 4 and description thereof. Although Europe '178 illustrates centered holes (figures 3C, 3D), Europe '178 does not recite a centerer having at least two contact pins.

As to claims 1 and 14, it would have been obvious to one of ordinary skill in the art to use the claimed centerer with at least two contact pins in Europe '178's process / apparatus of manufacturing a laminated optical disc such that each of the disc substrates is centered since Japan '242, also directed to making a laminated optical disc, motivates one of ordinary skill in the art to use **centerer (3) having radially movable contact pins (4)** during the manufacture of a laminated optical disc to adjust the position of each disc such that the holes of the discs are aligned and eccentricity is thereby decreased. See figures and abstract.

With respect to "an air source that supplies air pressure to the centerer to extend the pins", it would have been obvious to one of ordinary skill in the art to obtain the radial movement for the pins of the centerer using an air cylinder since Japan '137, also directed to a centerer having radially movable contact pins, teaches obtaining the desired radial movement of contact pins 6 of a centerer by raising a pin 4 with **an air cylinder (3)**.

With respect to the pins simultaneously contacting an inside circumferential edge of the common center hole of the superimposed substrates, it would have been obvious to one of ordinary skill in the art to use pins of a sufficient size so as to simultaneously contact the inner circumferential edges of the holes of the disc substrates in order to

expedite the centering process in view of the suggestion from at least one of Japan '234 and Japan '629 to use a centering means of sufficient size such that the centering means simultaneously contacts the inner circumferential edges of the holes of disc substrates to be laminated together. In Japan '234, the centering means comprises radially movable contact pins (18, 20). In Japan '629, the centering means comprises a radially expandable hollow member (35).

Hence, Europe '178 discloses a well known laminated optical disc manufacturing process / apparatus. Japan 242 motivates one of ordinary skill in the art to use a centerer having radially movable contact pins in the well known laminated optical disc manufacturing process / apparatus so that the holes of disc substrates to be laminated are aligned. What should be used to obtain the radial movement described by Japan '242? Answer: An air cylinder. See Japan '137. How many disc substrates should be centered at one time? Answer: Two instead of one. See at least one of Japan '234 and Japan '629. No unexpected results over the applied prior art has been shown.

As to claims 3 and 4, note Europe '178's teaching to apply the adhesive using an adhesive applying means as shown in figure 3A. Europe '178 teaches that the adhesive is UV curable.

As to claim 6, the limitation of spreading the claimed annular mound of adhesive would have been obvious in view of Europe '178's teaching to spread a donut of adhesive.

As to claim 16, note Europe '178's teaching to cure the adhesive. Claim 16 reads on curing all of the adhesive instead of only at a location in proximity to the hole.

6) **Claims 2, 7, 8, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 in view of Japan '242, Japan '137 and at least one of Japan '234 and Japan '629 as applied above and further in view of Japan '630 (JP 4-139630).**

As to claims 2, 7, 8 and 15-17, it would have been obvious to provide Europe '178's optical disc laminating method / apparatus, which has a bonding device (UV source), with the claimed provisional bonding device / warping prevention device since Japan '630, also directed to making a laminated optical disc, suggests tentatively fixing discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

7) **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 in view of Japan '242, Japan '137 and at least one of Japan '234 and Japan '629 as applied above and further in view of Komori et al (US 5227213).**

As to claim 4, it would have been obvious to adapt the apparatus to apply a thermoplastic adhesive in view of Europe '178's teaching to apply a UV curable adhesive to form a laminated optical disc and Komori et al's teaching to use a hot melt (thermoplastic) UV curable adhesive to form a laminated optical disc.

8) **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 in view of Japan '242, Japan '137 and at least one of Japan '234 and Japan '629 as applied above and further in view of Japan '786 (JP 8-36786).**

As to claim 6, the limitation of spreading the claimed annular mound of adhesive would have been obvious as noted above in view of Europe '178's teaching to spread a

donut of adhesive and Japan '786's teaching to spread an annular mound of adhesive as shown in figures 1-2.

Remarks

9) Applicant's arguments with respect to claims 1-4, 6-8 and 14-17 have been considered but are moot in view of the new ground(s) of rejection.

The 35 USC 112 rejections have been withdrawn in view of (1) the amendments to claims 1 and 14 filed 5-28-04 and (2) applicant's arguments in the first full paragraph of page 12 of the response filed 5-28-04.

US 2004/0094271 to Hupp et al is cited of interest for disclosing an expandable element for contacting the inner holes of substrates.

Europe '315 (EP 833315 A2) is cited of interest for disclosing spreading a boss for centering disc substrates. Europe '315 is not available as prior art since the publication date (4-1998) is after the filing date (4-18-97) of applicant's parent application PCT/JP97/01345.

10) No claim is allowed.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
August 2, 2004

STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733

8-2-04